Draft Forestry – Roads Issues

The State of Oregon does not have management measures on forestry lands that address water quality impairments associated with road density and maintenance particularly on "legacy roads" or impairments associated with a large portion of the existing road network where construction or reconstruction is not being proposed.

Original 1998 Condition: Within two years, Oregon will identify and begin applying additional management measures where water quality impairments and degradation of beneficial uses attributable to forestry exist despite implementation of the (g) measures.

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NOAA and EPA have identified areas where existing practices under the FPA and FPR should be strengthened to attain water quality and standards and fully support beneficial uses … [including] … road density and maintenance, particularly on so-called 'legacy' roads…..

'Legacy forest roads' (that is, roads constructed and used prior to adoption of the FPA and not used and maintained since then) were not required to be treated and stabilized before closure. In some locations, this has resulted in significantly altered surface drainage, diversion of water from natural channels, and serious erosion or landslides. The ODF has proposed an expedited voluntary program to inventory and prioritize the upgrading of roads built prior to 1974 on industrial forest lands."

Basic CZARA Management Measures Related to Forestry Road Management

Note: NOAA and EPA found Oregon had satisfied all of the basic CZARA forestry MMs in the 1998 conditional approval findings. Instead, we noted Oregon needed additional management measures where water quality impairments and the degradation of beneficial uses were impaired due to forestry activities and cited our concern about the existing gaps in Oregon's forestry road management program, including the state's ability to address legacy road issues. It has been NOAA and EPA policy not to revisit any management measure approvals that were made during the 1998 findings.

A. Preharvest Planning Management Measure

Perform advance planning for forest harvesting that includes the following elements where appropriate:

(5) Consider additional contributions from harvesting or roads to any known existing water quality impairments or problems in watersheds of concern.

Perform advance planning for forest road systems that includes the following elements where appropriate:

(1) Locate and design road systems to minimize, to the extent practicable, potential sediment generation and delivery to surface waters. Key components are:

- locate roads, landings, and skid trails to avoid to the extent practicable steep grades and steep hillslope areas, and to decrease the number of stream crossings;
- avoid to the extent practicable locating new roads and landings in Streamside Management Areas (SMAs); and
- determine road usage and select the appropriate road standard.

(2) Locate and design temporary and permanent stream crossings to prevent failure and control impacts from the road system. Key components are:
- size and site crossing structures to prevent failure;
- for fish-bearing streams, design crossings to facilitate fish passage.

(3) Ensure that the design of road prism and the road surface drainage are appropriate to the terrain and that road surface design is consistent with the road drainage structures.
(4) Use suitable materials to surface roads planned for all-weather use to support truck traffic.
(5) Design road systems to avoid high erosion or landslide hazard areas. Identify these areas and consult a qualified specialist for design of any roads that must be constructed through these areas.

B. Streamside Management Areas (SMA)
(1) Establish and maintain a streamside management area to buffer against detrimental changes in temperature, bank stability, and wind damage.
(2) Manage the SMA in such a way as to protect against soil disturbances in the SMA and delivery to the stream of sediments and nutrients generated by forestry activities including harvesting.

C. Road Construction/Reconstruction
(1) Follow preharvest planning (as described under Management Measure A) when constructing or reconstructing the roadway.
(2) Follow designs planned under Management Measure A for road surfacing and shaping.
(3) Install road drainage structures according to designs planned under Management Measure A and regional storm return period and installation specifications. Match these drainage structures with terrain features and with road surface and prism designs.
(4) Guard against the production of sediment when installing stream crossings.
(5) Protect surface waters from slash and debris material from roadway clearing.
(6) Use straw bales, silt fences, mulching, or other favorable practices on disturbed soils on unstable cuts, fills, etc.
(7) A void constructing new roads in SMAs to the extent practicable.

D. Road Management
(1) Avoid using roads where possible for timber hauling or heavy traffic during wet or thaw periods on roads not designed and constructed for these conditions.
(2) Evaluate the future need for a road and close roads that will not be needed. Leave closed roads and drainage channels in a stable condition to withstand storms.
(3) Remove drainage crossings and culverts if there is a reasonable risk of plugging or failure from lack of maintenance.
(4) Following completion of harvesting, close and stabilize temporary spur roads and seasonal roads to control and direct water away from the roadway. Remove all temporary stream crossings.
(5) Inspect roads to determine the need for structural maintenance. Conduct maintenance practices, when conditions warrant, including cleaning and replacement of deteriorated structures and erosion controls, grading or seeding of road surfaces, and, in extreme cases, slope stabilization or removal of road fills where necessary to maintain structural integrity.
(6) Conduct maintenance activities, such as dust abatement, so that chemical contaminants or pollutants are not introduced into surface waters to the extent practicable.

The objective of this management measure is to manage existing roads to maintain stability and utility and to minimize sedimentation and pollution from runoff-transported materials. Roads that are actively eroding and providing significant sediment to waterbodies, whether in use or not, must be managed. If roads are no longer in use or needed in the foreseeable future, an effective treatment is to remove drainage crossings and culverts if there is a risk of plugging or failure from lack of maintenance.

Background

EPA and NOAA's decision to place additional management measures for forestry arose from NMFS' proposal to list coastal coho as threatened under ESA in July 1995. The State initiated a Coastal Salmon Restoration Initiative (CSRI) often called "The Oregon Plan" in October 1995. This was a multi-agency statewide effort to evaluate the health of salmon, forestry practices and other processes harming salmon in Oregon coastal regions. The Plan described proposed and voluntary conservation measures in

Oregon's programs as an alternative to NMFS listing coastal coho salmon under ESA. The CSRI was completed in March 1997, and in May 1997, NMFS withdrew its proposal to list coastal coho based on the Oregon Plan. NRDC challenged this decision, and in June 1998, the U.S. District Court overturned NMFS' decision stating that NMFS could not rely on proposed and voluntary conservation measures as a basis for not listing species. In August 1998, NMFS listed coastal coho as threatened under ESA.

The 1997 Oregon Plan comprised the work of scientists in state agencies and academic institutions over two years to evaluate the effects of forestry and other practices on salmon. It identified causes of degradation to salmon habitat and salmon health from forestry practices and recommended actions by ODF and other agencies for improvement. Forestry dominates the land use in Oregon's coastal areas, so many of the recommendations in the Oregon Plan relate to ODF and improvements to forestry practices.

Basis for Adding Management Measure to address water quality impairments associated with road density and maintenance particularly on "legacy roads", or impairments associated with a large portion of the existing road network where construction or reconstruction is not being proposed.

While harmful impacts to salmon from roads, landslides and lack of riparian protections are mentioned in many reports and early on in the CSRI process, a September 10, 1996 NMFS memo identifies "Roads Related Problems" as one of the serious inadequacies in the CSRI. In its memo, NMFS indicated that the revised forest practice rules have no well-defined process to identify problems with older logging roads and railroad grades constructed under previous forest practices (prior to 1994).[1] NMFS also indicated that Oregon's proposed measures to address roads, i.e. ODF CSRI measures 1-3, for culverts, stream crossings, skid trails, and ODF measure 10 for voluntary identification of high risk erosion sites, apply to roads post 1994 construction (measures 1-3) and post 1973 construction (measure 10). Additionally NMFS provided that "over the last century forest practices have left many older roads and railroad grades, i.e. 'legacy' roads. Only roads that have been used since 1971 are addressed by the rule". NMFS also explains that "According to the ODF, there is no process for any state agency to inspect or address the potential slope failures associated with these legacy roads. Monitoring done in 1988 found these older roads were major sources of landslides"[2]

In an April 1996 memo from NMFS's Elizabeth Gaar to OCRM Patty Dornbusch regarding "Comments on State of Oregon's 6217 Program Submission, Gaar states that "There is no process to identify road problems, properly maintain or upgrade existing roads including older logging roads…This issue of 'legacy roads' is widespread and remains unaddressed by any state agency. These are the single biggest potential sources of sediment to fish streams."[3]

In its September 14, 1999 Technical Report 199-1, Oregon's Independent Multidisciplinary Science Team (IMST) found that "'Old roads and railroad grades' on forestlands, sometimes called legacy roads, are not covered by the OFPA? rules unless they are reactivated for a current forestry operation or purposes.

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IMST believes the lack of a mechanism to address the risks presented by such roads is a serious impediment to achieving the goals of the Oregon Plan. A process that will result in the stabilization of such roads is needed, with highest priority attention to roads in core areas, but with attention to such roads and railroad grades at all locations on forestlands over time.[4]

Summary Points

- In 1998, 2004, 2008 and 2013, EPA and NOAA identified that Oregon had not met an additional forestry management measure to address water quality impairments associated with road density and maintenance particularly on "legacy roads" or impairments associated with a large portion of the existing road network where construction or reconstruction is not being proposed. However, we acknowledged that Oregon has made some progress to address the roads issues (see bullet below on the changes that the BOF has made).
- Numerous studies show legacy roads contribute to landslides and deliver sediment to both fish and non-fish bearing streams.
- ODF uses both regulatory and voluntary measures to address forest roads.
- FPA defines three types of roads: Active, Inactive and Vacated. A road used for forest management access since the effective date of the FPA (1971) is either active (for commercial timber) or inactive (for non-commercial) and must be maintained to FPA standards unless it is vacated. A vacated road is one that is impassable and no longer to be used for forest management – must be blocked from access.
- The Board of Forestry has made several changes to general road maintenance measures to improve water quality. Changes made in 2002 and 2003, included: (1) establishment of a "Critical Locations" Policy for avoiding the building of roads in critical locations such as high hazards landslide areas, steep slopes, or within 50 feet of waterbodies (applies to new or reconstructed roads); (2) creation of additional rules to address wet-weather hauling (OAR 629-625-0700) (applies only to roads near F and D streams), and (3) revision of an existing road drainage rule to reduce sediment delivery (OAR 629-625-0330)(applies to new and reconstructed roads).
- Rules don't address "old" or legacy roads, i.e., aforementioned measure and FPA rules do not apply to roads established before 1971 unless those roads are being reconstructed
- Most Oregon forestry roads were constructed before 1984
- Landowners are encouraged to implement voluntary monitoring measures to identify and further reduce risks of sediment delivery from roads to streams
- While the state provided some details on the success of the voluntary monitoring program, it did not provide sufficient description of the scope voluntary effort
- Voluntary Measure to Inventory If successful, the BOF's rule review process will result in greater riparian protections for medium and small fish bearing streams.
- Voluntary program to address legacy road issues, it is neither comprehensive nor is it designed to monitor and track progress toward rehabilitating those roads having the most serious impacts on water quality.

[4] P. 47 of IMST

- ODF? established an agreement with the USFS to implement a road inventory program. However, information not provided to determine the scope or success of the USFS inventory program

Current Uncertainties

- Voluntary Monitoring Program lacks detail – needs further evaluation.
- Status of the USFS monitoring program is uncertain – need to communicate with USFS
- Information on the States desire to implement enforcement program was submitted in its response to our proposed decision but needs further review
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Action Options and Recommendation

Staff Recommendation

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~~(7) Properly maintain permanent stream crossings and associated fills and approaches to reduce the likelihood (a) that stream overflow will divert onto roads, and (b) that fill erosion will occur if the drainage structures become obstructed.~~

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[4] P. 47 of IMST

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Action Options and Recommendation

Ex. 5 - Deliberative

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Staff Recommendation